

AZB10178

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UNOCAL MATERIAL SAFETY DATA SHEET

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Urea, Granular
 Product Code: 816, 817, 818, 819, 822, 823, 825
 Generic Name: Carbamide
 Chemical Family: Organic salt
 Responsible Party: Unocal Agricultural Products
 Union Oil Company of California
 P.O. Box 7600
 Brea, California
 92822

For further information contact MSDS Coordinator
 8am - 4pm Pacific Time, Mon - Fri: 800-825-0076

EMERGENCY OVERVIEW

24 Hour Emergency Telephone Numbers:

For Chemical Emergencies:	For Health Emergencies:
Spill, Leak, Fire or Accident	California Poison
Call CHEMTREC	Control System
North America: (800)424-9300	Cont. US: (800)356-3129
Others: (703)527-3887 (collect)	Outside US: (415)8212-5338

Health Hazards: Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

Physical Hazards: None Anticipated

< Physical Form: Solid
 < Appearance: White granules
 < Odor: None

NFPA HAZARD CLASS: Health: 0 (Least)
 Flammability: 0 (Least)
 Reactivity: 0 (Least)

2. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS	% Weight	EXPOSURE GUIDELINE		
		Limits	Agency	Type
Nuisance Dust, If		10 mg/m3	ACGIH	TWA-Tot.

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Generated	3 mg/m3	ACGIH	TWA-Resp.
CAS# None	15 mg/m3	OSHA	TWA-Tot.
	5 mg/m3	OSHA	TWA-Resp.
	10 mg/m3	MSHA	TWA
	10 mg/m3	Cal.OSHA	TWA-Tot.
	5 mg/m3	Cal.OSHA	TWA-Resp.

OTHER COMPONENTS	% Weight	EXPOSURE GUIDELINE		
		Limits	Agency	Type
Urea CAS# 57-13-6	97-99	(See Nuisance Dust, If Generated)		
Methylenediurea* CAS# 13547-17-6	1.5-2.5	Not Established		
Biuret CAS# 108-19-0	0.75-1.3	Not Established		

*Methylenediurea is in the class of materials known as Urea, reaction products (CAS# 68611-64-3).

Note: State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

3. HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS:

Eye: Contact may cause mild eye irritation including stinging, watering, and redness.

Skin: Contact may cause mild skin irritation including redness and burning. No harmful effects from skin absorption have been reported.

Inhalation (Breathing): No information available. Studies by other exposure routes suggest a low degree of toxicity by inhalation.

Ingestion (Swallowing): No harmful effects reported from ingestion.

Signs and Symptoms: Effects of overexposure may include irritation of the nose, throat and digestive tract, headaches, coughing, nausea, vomiting, and transient disorientation.

Cancer: Inadequate data available to evaluate the cancer hazard of

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this material.

Target Organs: No data available.

Developmental: Inadequate data available for this material.

Pre-Existing Medical Conditions: None known

4. FIRST AID MEASURES

Eye: If irritation or redness develops, move victim away from exposure and into fresh air. Flush eyes with clean water. If symptoms persist, seek medical attention

Skin: Remove contaminated shoes and clothing and cleanse affected area(s) thoroughly by washing with mild soap and water. If irritation or redness develops and persists, seek medical attention.

Inhalation (Breathing): If respiratory symptoms develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention. If victim is not breathing, clear airway and immediately begin artificial respiration. If breathing difficulties develop, oxygen should be administered by qualified personnel. Seek immediate medical attention.

Ingestion (Swallowing): First aid is not normally required; however, if swallowed and symptoms develop, seek medical attention.

5. FIRE FIGHTING MEASURES

Flammable Properties: Flash Point: No data
OSHA Flammability Class: Not applicable
LEL/UEL: No data
Autoignition Temperature: No data
Burn Rate (solids): No data

Unusual Fire & Explosion Hazards: No unusual fire or explosion hazards are expected.

Extinguishing Media: Use extinguishing agent suitable for type of surrounding fire.

Fire Fighting Instructions: For fires beyond the incipient stage, emergency responders in the immediate hazard area should wear bunker gear. When the potential chemical hazard is unknown, in enclosed or confined spaces, or when explicitly required by DOT, a

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self-contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8). Isolate immediate hazard area, keep unauthorized personnel out. Contain spill if it can be done with minimal risk. Move undamaged containers from immediate hazard area if it can be done with minimal risk. Cool equipment exposed to fire with water, if it can be done with minimal risk.

6. ACCIDENTAL RELEASE MEASURES

Stay upwind and away from spill. Isolate immediate hazard area and keep unauthorized personnel out. Contain spill if it can be done with minimal risk. Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section 8). Prevent spilled material from entering sewers, storm drains, other unauthorized treatment drainage systems, and natural waterways. Notify appropriate federal, state, and local agencies. Minimize dust generation. Sweep up and package appropriately for disposal.

7. HANDLING AND STORAGE

Handling: Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. The use of appropriate respiratory protection is advised when concentrations exceed any established exposure limits (see Sections 2 and 8). Wash thoroughly after handling. Do not wear contaminated clothing or shoes. Use good personal hygiene practice.

Storage: Keep container(s) tightly closed. Use and store this material in cool, dry, well-ventilated areas. Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls: If current ventilation practices are not adequate to minimize exposure, additional ventilation or exhaust systems may be required.

Personal Protective Equipment (PPE):

Respiratory: A NIOSH certified air purifying respirator with a N95 filter may be used under conditions where airborne concentrations are expected to exceed exposure limits (see Section 2). Protection provided by air purifying respirators is limited (see manufacturer's respirator selection guide).

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Use a positive pressure air supplied respirator if there is potential for uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHA's 29CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin: The use of gloves impermeable to the specific material handled is advised to prevent skin contact, possible irritation, and absorption (see glove manufacturer literature for information on permeability).

Eye/Face: Approved eye protection to safeguard against potential eye contact, irritation, or injury is recommended. Depending on conditions of use, a face shield may be necessary.

Other Protective Equipment: A source of clean water should be available in the work area for flushing eyes and skin. Impervious clothing should be worn as needed.

9. PHYSICAL AND CHEMICAL PROPERTIES

Note: Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1 atm).

Flash Point: No data

Flammable/Explosive Limits (%): No data

Autoignition Temperature: No data

Burn Rate (solids only): No data

Appearance: White granules

Physical State: Solid

Odor: None

Vapor Pressure (mm Hg): No data

Vapor Density (air=1): No data

Boiling Point: No data

Freezing/Melting Point: 271°F

Solubility in Water: 100%

Specific Gravity: >1

Bulk Density: 49.5 lbs/ft³**10. STABILITY AND REACTIVITY**

Chemical Stability: Stable under normal conditions of storage and handling.

Conditions To Avoid: None known

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Incompatible Materials: Nitric acid or hypochlorites react with urea to form unstable and potentially explosive compounds. Avoid contact with strong oxidizing agents.

Hazardous Decomposition Products: If involved in a fire, oxides of carbon and nitrogen may be generated. Exposure to heat may generate ammonia and ammonium cyanate fumes.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

No definitive information available on carcinogenicity, mutagenicity, target organs or developmental toxicity.

12. DISPOSAL CONSIDERATIONS

This material, if discarded as produced, is not a RCRA "listed" or "characteristic" hazardous waste. Use resulting in chemical or physical change or contamination may subject it to regulation as a hazardous waste. Along with properly characterizing all waste materials consult state and local regulations regarding the proper disposal of this material.

13. TRANSPORT INFORMATION

Hazard Class or Division: Not classified as hazardous

14. REGULATORY INFORMATION

This material contains the following chemicals subject to the reporting requirements of **SARA 313** and 40 CFR 372.

--None--

Warning: This material contains the following chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm, and are subject to the requirements of **California Proposition 65** (CA Health & Safety Code Section 25249.5)

--None Known--

This material has not been identified as a carcinogen by NTP, IARC, or OSHA.

EPA (CERCLA) Reportable Quantity: --None--

15. DOCUMENTARY INFORMATION

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